UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/972,994	10/10/2001	Eric Majani	1807.1874	4775

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EXAMINER
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ART UNIT	PAPER NUMBER
2193	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _17 February 2005_.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-63_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-4,6,7,9-13,15,16,18,25-29,31,32,34-38,40,41,43 and 50-63_ is/are rejected.

7) ☒ Claim(s) _5,8,14,17,19-24,30,33,39,42 and 44-49_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a) ☐ All b) ☐ Some * c) ☐ None of:

  1. ☐ Certified copies of the priority documents have been received.

  2. ☐ Certified copies of the priority documents have been received in Application No. _____.

  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Amendment filed 02/17/2005.

2.   Claims 1-63 are pending in this application. Claims 1, 10, 25, 26, 35, and 50-63

are independent claims. This Office action is made final.

Specification

The following guidelines illustrate the preferred layout for the specification of a
utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should
include the following sections in order. Each of the lettered items should appear in
upper case, without underlining or bold type, as a section heading. If no text follows the
section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
        DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
        COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer
        program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),
        and tables having more than 50 pages of text are permitted to be
        submitted on compact discs.) or
        REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
        "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(f) BACKGROUND OF THE INVENTION.
        (1) Field of the Invention.
        (2) Description of Related Art including information disclosed under 37
        CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3.   The disclosure is objected to because of the following informalities: the applicant is advised to insert proper section heading into the specification for clarification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-4, 6-7, 9-13, 15-16, 18, 24-29, 31-32, 34-38, 40-41, 43, and 50-63 are rejected under 35 U.S.C. 102(e) as being anticipated by Ortega et al. (U.S. 6,757,343).

Re claim 1, Ortega et al. disclose in Figures 1 and 3-4 a filtering method for transforming an input digital signal into one or more output digital signals (title) having even-indexed samples and odd-indexed samples (Figure 3 with input shift by unit in order to be odd) method including at least one iteration (Figure 1 with 3 iterations) comprising the steps of: modifying the even-indexed samples by a function of weighted odd-indexed samples (output filter of y0

wherein the input is the even-index sample entering h1 as odd-indexed

coefficient), and modifying the odd-indexed samples by a function of weighted

even-indexed samples (output filter of 130 wherein the input is the odd-index

sample entering h0 as even-indexed coefficient), wherein the weighted samples

are obtained by at least one weighting operation applied to a difference between

two consecutive even-indexed samples (Figure 4 wherein alpha is obtained and

applied to only even-index samples on the synthesis path or return).

Re claim 2, Ortega et al. further disclose in Figures 1 and 3-4 a step of

modifying the odd-indexed samples is performed after step of modifying the even

indexed samples (Figure 4 in the second step at T2).

Re claim 3, Ortega et al. further disclose in Figures 1 and 3-4 iteration

further comprises: weighting (process of outputting odd-indexed sample at 120),

by a first weighting coefficient (h0), at least one odd-indexed sample adjacent to

an even-indexed sample currently being modified, so as to obtain a weighted

odd- indexed sample (output of 130 after down-sample), modifying at least one

even-indexed sample using the at least one weighted odd-indexed sample,

weighting (process of outputting odd-indexed sample at 110), by a second

weighting coefficient (h1), even-indexed samples adjacent to an odd-indexed

sample currently being modified, so as to obtain weighted even-indexed samples

(output of 130 after down-sample), and modifying at least one odd-indexed

sample using at least one weighted even- indexed sample.

Re claim 4, Ortega et al. further disclose in Figures 1 and 3-4 the second weighting coefficient is a function of the first weighting coefficient (inherently feature for stable condition).

Re claim 6, Ortega et al. further disclose in Figures 1 and 3-4 at each iteration, an odd-indexed sample adjacent to an even sample currently being modified (Figure 1) is alternately a sample of rank immediately below or immediately above the adjacent even sample.

Re claim 7, Ortega et al. further disclose in Figures 1 and 3-4 at the end of iteration, an additional step of filtering that includes weighting by a third weighting coefficient (Figure 3 with addition of another coefficients h10 or h01).

Re claim 9, Ortega et al. further disclose in Figures 1 and 3-4 the digital input signal represents an image (col. 1 lines 15-17).

Re claim 10, it has same limitations cited in claim 1. Thus, claim 10 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 11, Ortega et al. further disclose in Figures 1 and 3-4 step of modifying even-indexed samples is performed after step of modifying odd-indexed samples (Figure 3 with T3).

Re claim 12, it has similar limitation as cited in claim 3 wherein it occurs in the subsequence iteration. Thus, claim 12 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Re claim 13, it has same limitations cited in claim 4. Thus, claim 13 is also rejected under the same rationale as cited in the rejection of rejected claim 4.

Re claim 14, it has same limitations cited in claim 5. Thus, claim 14 is also rejected under the same rationale as cited in the rejection of rejected claim 5.

Re claim 15, it has same limitations cited in claim 6. Thus, claim 15 is also rejected under the same rationale as cited in the rejection of rejected claim 6.

Re claim 16, it has same limitations cited in claim 7. Thus, claim 16 is also rejected under the same rationale as cited in the rejection of rejected claim 7.

Re claim 17, it has same limitations cited in claim 8. Thus, claim 17 is also rejected under the same rationale as cited in the rejection of rejected claim 8.

Re claim 18, it has same limitations cited in claim 9. Thus, claim 18 is also rejected under the same rationale as cited in the rejection of rejected claim 9.

Re claim 25, Ortega et al. further disclose in Figures 1 and 3-4 means adapted to implement a filtering method (Figure 11).

Re claim 26, Ortega et al. further disclose in Figures 1 and 3-4 a digital filtering device adapted to transform an input digital signal into one or more

output digital signals (abstract) containing even-indexed samples and odd-indexed samples (Figure 3), filtering device comprising: at least one weighting module (Figure 11 P(z); and means for modifying even-indexed samples by a function of weighted odd- indexed samples (output 110), wherein weighted samples are supplied by at least one weighting module, modification means functioning iteratively, so as to modify even-indexed samples at least once and then odd-indexed samples at least once (col. 6 lines 25-35 with update filter), and at least one weighting module receives as an input the difference between two consecutive even-indexed samples.

Re claim 27, it has means limitations cited in claim 2. Thus, claim 27 is also rejected under the same rationale as cited in the rejection of rejected claim 2.

Re claim 28, it has means limitations cited in claim 3. Thus, claim 28 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Re claim 29, it has means limitations cited in claim 4. Thus, claim 29 is also rejected under the same rationale as cited in the rejection of rejected claim 4.

Re claim 30, it has means limitations cited in claim 5. Thus, claim 30 is also rejected under the same rationale as cited in the rejection of rejected claim 5.

Re claim 31, it has means limitations cited in claim 6. Thus, claim 31 is also rejected under the same rationale as cited in the rejection of rejected claim 6.

Re claim 32, it has means limitations cited in claim 7. Thus, claim 32 is also rejected under the same rationale as cited in the rejection of rejected claim 7.

Re claim 33, it has means limitations cited in claim 8. Thus, claim 33 is also rejected under the same rationale as cited in the rejection of rejected claim 8.

Re claim 34, it has means limitations cited in claim 9. Thus, claim 34 is also rejected under the same rationale as cited in the rejection of rejected claim 9.

Re claim 35, Ortega et al. further disclose in Figures 1 and 3-4 a digital filtering device adapted to transform one or more input digital signals into an output digital signal (abstract), the input signals containing even-indexed samples and odd-indexed samples (Figure 3), filtering device comprising: at least one weighting means (Figure 11 with P(z)); means for modifying odd-indexed samples by a function of weighted even- indexed samples (Figure 1 with output of 120); and means for modifying even-indexed samples by a function of weighted odd- indexed samples (Figure 1 with output of 110), wherein weighted samples are supplied by at least one weighting means (P(z)), modification means functions iteratively, so as to modify odd-indexed samples at least once and then

even-indexed samples at least once (col. 6 lines 25-35 with updated filter), and wherein at least one weighting means receives as an input the difference between two consecutive even-indexed samples.

Re claim 36, it has means limitations cited in claim 11. Thus, claim 36 is also rejected under the same rationale as cited in the rejection of rejected claim 11.

Re claim 37, it has means limitations cited in claim 12. Thus, claim 37 is also rejected under the same rationale as cited in the rejection of rejected claim 12.

Re claim 38, it has means limitations cited in claim 13. Thus, claim 38 is also rejected under the same rationale as cited in the rejection of rejected claim 13.

Re claim 39, it has means limitations cited in claim 14. Thus, claim 39 is also rejected under the same rationale as cited in the rejection of rejected claim 14.

Re claim 40, it has means limitations cited in claim 15. Thus, claim 40 is also rejected under the same rationale as cited in the rejection of rejected claim 15.

Re claim 41, it has means limitations cited in claim 16. Thus, claim 41 is also rejected under the same rationale as cited in the rejection of rejected claim 16.

Re claim 42, it has means limitations cited in claim 17. Thus, claim 42 is also rejected under the same rationale as cited in the rejection of rejected claim 17.

Re claim 43, it has means limitations cited in claim 18. Thus, claim 43 is also rejected under the same rationale as cited in the rejection of rejected claim 18.

Re claim 50, it has means limitations cited in claim 25. Thus, claim 50 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 51, Ortega et al. further disclose in Figures 1 and 3-4 at least two digital filtering devices the output signal of one of the digital filtering devices being the input signal of the other digital filtering device (Figure 4 wherein each T is a filter device).

Re claim 52, it is a digital apparatus claim of claim 25. Thus, claim 52 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 53, it is a photographic apparatus claim of claim 25. Thus, claim 52 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 54, it has same limitations cited in claim 25. Thus, claim 54 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 55, Ortega et al. further disclose in Figures 1 and 3-4 an encoding device comprising at least one filtering device (Figure 4 wherein each T is a filter device).

Re claim 56, Ortega et al. further disclose in Figures 1 and 3-4 the above method is used as digital compression (Figure 1 wherein only the lower bank is filter iteratively for compressing the upper part).

Re claim 57, it has same limitations cited in claim 55. Thus, claim 57 is also rejected under the same rationale as cited in the rejection of rejected claim 55.

Re claim 58, it is an information storage, which stores a program of the filter as cited claim 1. Thus, claim 58 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 59, it is a computer program product claim of claim 1. Thus, claim 59 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 60, it has same limitations cited in claim 52. Thus, claim 60 is also rejected under the same rationale as cited in the rejection of rejected claim 52.

Re claim 61, it has same limitations cited in claim 53. Thus, claim 61 is also rejected under the same rationale as cited in the rejection of rejected claim 53.

Re claim 62, it has same limitations cited in claim 50. Thus, claim 62 is also rejected under the same rationale as cited in the rejection of rejected claim 50.

Re claim 63, it has same limitations cited in claim 53. Thus, claim 63 is also rejected under the same rationale as cited in the rejection of rejected claim 53.

Allowable Subject Matter

6.   Claims 5, 8, 14, 17, 19-24, 30, 33, 39, 42, and 44-49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7.   Applicant's arguments filed 02/17/2005 have been fully considered but they are not persuasive.

a.   The applicant argues in pages 22-23 for independent claims that the cited reference by Ortega et al. does not disclose or suggest at least the features of obtaining weighted samples by at least one weighting operation applied to a difference between two consecutive even-indexed samples.

The examiner respectfully submits that the difference between two consecutive even-indexed samples occurs at the synthesis stage as

conventional to wavelet algorithm, which only the analysis portion is

shown in Figures 3-4.

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

    b.   U.S. Patent No. 6,499,045 to Turney et al. disclose an implementation of a

two-dimensional wavelet transform.

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

    A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721.

The examiner can normally be reached on 7:00AM to 5:00PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chaki Kakali can be reached on (571) 272-3719. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Chat C Do
Examiner
Art Unit 2193

April 22, 2005

TODD INGBERG
PRIMARY EXAMINER